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STATE
OF
MONTANA

DIVISION OF FORENSIC SCIENCE

DEPARTMENT OF JUSTICE

275 West Front Street, Missoula, MT 59802 (406) 728-4970



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APRIL 1984

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EVIDENCE

When submitting evidence to the lab please be sure to use the DFS submission forms. The form should be attached to the outside of the package or sent separately. (If sent separately, please mark the package and form in some way so we can match the correct form with the evidence.)

If you have questions about forms or need forms contact Jeanne at the lab.

SCIENTIFIC SCHOOLS

Ken Anderson, Mary Healey and Bill Newhouse attended a three day workshop on the Intoxilyzer operation.

Ken Konzak was a moderator for the Serology section of the American Academy of Forensic Sciences.

Ron Rivers presented papers at the forensic seminar during the American Society for Clinical Pathologists.

ON CALL SCHEDULE - MONTANA STATE MEDICAL EXAMINER

APRIL 1984

275 W. Front Street
Missoula, Montana 59802

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 JOHN PFAFF	2	3	4	5	6	7 JOHN PFAFF
8 JOHN PFAFF	9	10	11	12	13	14 RON RIVERS
15 RON RIVERS	16	17	18	19	20	21 JOHN PFAFF
22 JOHN PFAFF	23	24	25	26	27	28 RON RIVERS
29 RON RIVERS	30					

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ANSWERS:

1. Perhaps the most important finding of all would be the jacket from a slug. The jacket will have the markings from the lands and grooves of the gun used in the shooting.

A "snowstorm" appearance is seen in wounds from high velocity ammunition. There are small fragments of lead peeled from the bullet as it passes through the body. Metallic fragments from unusual ammunition may be "anvils" from exploding ammunition, or a steelball from expanding point ammunition. Some nonmetallic wadding, shot cups, sabots, or accelerator jackets may be detected.

2. A broken-off knife blade or sharp injuries to a bone may be seen by X-ray. The unsuspected broken neck has often been determined by X-ray. The same applies to skull fractures.
3. Certainly the best X-rays to identify an individual are those taken of the teeth before death and compared with those taken after death.

X-rays taken of the chest or skull before death are valuable. Old fractured ribs, spine deformities, and the shape and size of the chest as well as individual bones are good identification points. The frontal sinuses of the skull have such unusual patterns they almost fingerprint each skull. Wire sutures in previously fractured jaws may be seen. Besides old fractures there may be wires, screws, nails, plates and pins left in the bone.

4. Perhaps the CAT scan or computerized axial tomography is the most important advancement in forensic radiology. It outlines the extent of head injuries or strokes almost as well as the pathologist.

Another technique is nuclear magnetic resonance which will give even clearer pictures of the brain. These will assist the pathologists in their assessment of brain injuries.

5. Under the pickle.

Reference: Sanders, I; Woesner, ME; Ferguson, RA, etal: A New Application of Forensic Radiology: Identification of Deceased from a Single Clavicle American Journal Roentgenol 115: 619-622; July 1972.



"Back in the good ol' days", the deputy coroner puffed, "we didn't have to haul these bodies in for X-rays all the time. It embarrasses me to bring burn cases and stinkers into the hospital. Can't these new pathologists find a bullet anymore? It sure seems to be a waste of time and money."

As the detective helped to move the body onto the X-ray table, he answered, "They are not just looking for bullets anymore. Why do you think we X-ray bodies with gunshot wounds that have gone clean through?"

The deputy exclaimed, "Yea, I never did understand that."

The detective sighed and suggested, "Tonight, let's get together over a beer. We won't only discuss that, but how important X-rays are for identification. Did you know a person was positively and legally identified from a single clavicle or collar bone?"

Just then the radiology technologist entered the room. "You will have to leave now. We are going to operate the X-ray machine."

As the deputy coroner and detective waited in the hall the latter commented, "You remember the two bodies burned up in the trailer home in 1979 don't you?"

"You bet", said the coroner. "That was terrible...no heads, arms or legs. What a mess!"

"Well, I won't forget either", said the detective. "X-rays solved that whole case for us. Besides eliminating bullets, knives and fractures, they differentiated the man from the woman; gave us their approximate ages and showed us the wire stitches in the one who had surgery. Later on that radiologist testified for us, under oath in court, that the bodies were positively those who we suspected them to be."

"That turned out good", said the deputy coroner, "but remember that other case where the families had to wait seven years before they could be declared dead?"

"Sure", answered the detective, "not only were all the bodies buried in a common grave, but their wills, estates, and bank accounts could never be settled."

"The X-rays are ready now", said the young technologist, "there is a bullet in his head."

"Holy cow!", exclaimed the deputy, "I didn't know he had been shot! Where's the hole?"

"It's under the pickle.", the detective laughed. "Actually, it's an old injury. We all knew he had a bullet in there from a long time ago."

"Thanks for your time, Miss."

QUESTIONS:

- 1) What besides bullets can be found in bullet holes by X-rays?
- 2) What other causes of death may be determined by X-ray?
- 3) What other findings on X-ray may help identify a person?
- 4) What other radiological procedures are useful to forensic pathology?
- 5) Where's the beef?